

App. No. 10/763,505  
Amendment Dated: February 5, 2007  
Reply to Final Office Action of December 4, 2006

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**Amendments to the Claims:**

1 (currently amended): A method for linking binary dependency relationships, comprising:

obtaining dependency relationships relating to binaries; using a vector to represent dependency information for one of the binaries; wherein the dependency information relates to the dependency relationships for the one of the binaries; creating a dependency matrix comprising at least two of the vectors; obtaining a full dependency matrix and identifying binary circular dependency clusters; wherein obtaining the full dependency matrix comprises calculating a next order dependency matrix until the next order dependency matrix is the same a previous order dependency matrix;

storing the dependency relationships within a binary dependency database; and

providing dependency information relating to the binaries that links dependencies wherein some of the dependency information spans ~~that may span~~ across the binaries and functions.

2 (previously presented): The method of Claim 1, further comprising, classifying each of the dependency relationships into a dependency type.

3 (previously presented): The method of Claim 2, wherein classifying each of the dependency relationships into the dependency type further comprise classifying the dependency type as a dynamic type when the dependency relationship is established at a runtime, and classifying the dependency type as a static type when the dependency relationship is established from inspecting the binaries.

4 (original): The method of Claim 2, further comprising determining a strength of a bond relating to the binaries.

5 (currently amended): The method of Claim 4, using the full dependency matrix to identify the binary circular dependency clusters ~~further comprising determining at least first order dependencies.~~

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6 (previously presented): The method of Claim 5, further comprising determining a likelihood of whether each of the dependency relationships is required.

7 (previously presented): The method of Claim 4, further comprising performing analysis regarding a footprint associated with at least some of the binaries.

Claims 8-10 (canceled).

11 (original): The method of Claim 10, wherein the dependency matrix is an  $n^{\text{th}}$  order dependency matrix.

Claim 12 (canceled).

13 (original): The method of Claim 1, wherein obtaining the dependency relationships relating to the binaries further comprises determining static and dynamic dependencies.

14 (currently amended): A system for linking binary dependency relationships, comprising:

a software system containing binaries;

a binary dependency database that is configured to store static and dynamic dependency relationships relating to the binaries; and

a processing tool that is configured to perform actions, including:

obtaining dependency relationships relating to the binaries; using a vector to represent dependency information for one of the binaries; wherein the dependency information relates to the dependency relationships for the one of the binaries; creating a dependency matrix comprising at least two of the vectors; obtaining a full dependency matrix and identifying binary circular dependency clusters; wherein obtaining the full dependency matrix comprises calculating a next order dependency matrix until the next order dependency matrix is the same as a previous order dependency matrix;

storing the dependency relationships within the binary dependency database; and

providing dependency information relating to the binaries that links dependencies wherein some of the dependency information spans across the binaries and functions.

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~~for processing the dependency relationships.~~

15 (original): The system of Claim 14, further comprising, classifying the dependency relationships into dependency types.

16 (original): The system of Claim 15, wherein the binary database further comprises a strength of a bond between the binaries.

17 (original): The system of Claim 16, wherein the processing tool further comprises performing an analysis regarding a footprint associated with the binaries.

18 (currently amended): The system of Claim 15, wherein classifying the dependency relationships into the dependency type further comprises classifying the dependency type as a dynamic type when the dependency relationship is established at a runtime, and classifying the dependency type as a static type when the dependency relationship is established from inspecting the binaries ~~Claim 16, wherein the processing tool further comprises using at least one matrix to represent dependency information for the binaries.~~

19 (currently amended): The system of Claim 18, further comprising using the calculating a full dependency matrix to identify the binary circular dependency clusters.

20 (currently amended): A computer-readable medium having computer executable instructions encoded thereon, the instructions being executed by a processor to provide the steps comprising:

obtaining dependency relationships relating to binaries; using a vector to represent dependency information for one of the binaries; wherein the dependency information relates to the dependency relationships for the one of the binaries; creating a dependency matrix comprising at least two of the vectors; obtaining a full dependency matrix and identifying binary circular dependency clusters; wherein obtaining the full dependency matrix comprises calculating a next order dependency matrix until the next order dependency matrix is the same as a previous order dependency matrix;

storing the dependency relationships within a binary dependency database; and

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providing dependency information relating to the binaries that links dependencies wherein some of the dependency information spans across the binaries and functions.

~~obtaining static and dynamic dependency relationships relating to binaries;~~

~~storing the relationships within a binary dependency database such that the relationships span across binaries; and~~

~~providing a processing tool for processing the dependency relationships.~~

21 (currently amended): The computer-readable medium of Claim 20, further comprising, classifying the dependency relationships into a dependency type[[s]].

22 (original): The computer-readable medium of Claim 21, further comprising determining a strength of a bond between the binaries.

23 (original): The computer-readable medium of Claim 22, further comprising performing analysis regarding a footprint associated with specific binaries selected from the binaries.

24 (currently amended): The computer-readable medium of Claim 21, Claim 22, wherein classifying each of the dependency relationships into the dependency type further comprise classifying the dependency type as a dynamic type when the dependency relationship is established at a runtime, and classifying the dependency type as a static type when the dependency relationship is established from inspecting the binaries further comprising ~~determining binary dependency clusters within the binaries.~~

25 (currently amended): The computer-readable medium of Claim 22, wherein the dependency matrix is an n<sup>th</sup> order dependency matrix. ~~further comprising creating a dependency matrix.~~

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26 (currently amended): The computer-readable medium of Claim 20 ~~Claim 25~~, further comprising determining a likelihood of whether each of the dependency relationships is required ~~obtaining a full dependency matrix and identifying binary circular dependency clusters~~.

27 (new): The computer-readable medium of Claim 20, wherein obtaining the dependency relationships relating to the binaries further comprises determining static and dynamic dependencies.

28 (new): The system of Claim 14, further comprising determining a likelihood of whether each of the dependency relationships is required.

29 (new): The system of Claim 14, wherein obtaining the dependency relationships relating to the binaries further comprises determining static and dynamic dependencies